



Decision Document

Environmental Protection Act 1986, Part V

Proponent: **Peel Resource Recovery Pty Ltd**

Licence: **L7060/1997/13**

Registered office: 7 Parkfield St
BUNBURY WA 6230

ACN: 149 428 697

Premises address: Cross Resource Management
70 Stanley Road
WELLESLEY WA 6233
Being Lot 43 on Plan 17161, as depicted in Schedule 1.

Issue date: Thursday, 21 August 2014

Commencement date: Friday, 29 August 2014

Expiry date: Wednesday, 28 August 2019

Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER), has decided to issue an amended licence. DER considers that in reaching this decision, it has taken into account all relevant considerations.

Decision Document prepared by: **Cassie Bell**
Licensing Officer

Decision Document authorised by: **Caron Goodbourn**
Delegated Officer



Contents

Decision Document	1
Contents	2
1 Purpose of this Document	2
2 Administrative summary	2
3 Executive summary of proposal and assessment	3
4 Decision table	6
5 Advertisement and consultation table	22
6 Risk Assessment	24
Appendix A	Error! Bookmark not defined.

1 Purpose of this Document

This decision document explains how DER has assessed and determined the application and provides a record of DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DER's assessment and decision making under Part V of the *Environmental Protection Act 1986*. Other approvals may be required for the proposal, and it is the proponent's responsibility to ensure they have all relevant approvals for their Premises.

2 Administrative summary

Administrative details		
Application type	Works Approval <input type="checkbox"/> New Licence <input type="checkbox"/> Licence amendment <input checked="" type="checkbox"/> Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	13: Crushing of building material	65,000 tonnes per annual period
	62: Solid waste depot	300,000 tonnes per annual period
	63: Class I Inert landfill site	115,000 tonnes per annual period
Application verified	Date: 23/10/2015	
Application fee paid	Date: n/a	
Works Approval has been complied with	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Compliance Certificate received	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Commercial-in-confidence claim	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Commercial-in-confidence claim outcome		
Is the proposal a Major Resource Project?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No:



<i>Environmental Protection Act 1986?</i>		Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i>)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Department of Water consulted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Is the Premises within an Environmental Protection Policy (EPP) Area Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Is the Premises subject to any EPP requirements? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

3 Executive summary of proposal and assessment

Peel Resource Recovery Pty Ltd (PRR) operates the Cross Resource Management site under Licence L7060/1997/13. The site is an active sand quarry and a privately owned waste management facility, dealing predominantly with inert wastes from the building, construction and demolition industries.

Location

The site is located 14 kilometres north-east of Bunbury and is located within the Kemerton Industrial Park bushland buffer zone. Residential properties are located less than 1km away in Australind, the closest being located 450m away.

The site is located on the Swan Coastal Plain in a geological formation comprising superficial deposits of dunal sands associated with the Tamala Limestone Unit to a depth 3 – 10 metres below ground level (BGL). Underlying this is superficial deposits of the clay-rich Guilford Formation (between 0.5 - 5.0 m thick). The alternating sand and clay layers result in the site being underlain by a shallow unconfined superficial formation and a series of confined aquifers, which overlies a shale unit that caps the Leederville Formation at depth of approximately 38 mBGL. The site is also underlain by the Yarragadee Aquifer at a greater depth.

A review of hydrology maps indicates the Brunswick River to be located approximately 250 metres south of the current landfilling area on-Site. The Wellesley River joins the Brunswick River south of the Site. The Brunswick River runs south south-west and joins with the Collie River approximately 4.5 km south South-west of the premises. The Collie River then runs into Leschenault Inlet and Geographe Bay. Leschenault Inlet is located 3 km west of Site.

A wetland of significant conservation value is located approximately 200 m east of the current active waste cell (Cell 3). A gas pipeline runs north/south, between Cell 3 and the wetland. There are no plans to disturb the land in the vicinity of the wetland.

Background and current activities

The site was originally one large property owned by J.W. Cross & Sons that was sub-divided in the late 1980s to facilitate sand extraction companies and the new Bunbury-Harvey Regional Council landfill. The site itself was established in the early 1990s as a sand quarry and in 1992, excavated voids were



backfilled with demolition wastes generated by associated businesses. In 1995, the site was opened to the general public as a registered inert landfill site.

The site was first licensed under the *Environmental Protection Act 1986* (EP Act) in 1997 as an inert landfill site, accepting and disposing of waste that has been classified as clean fill, Type 1 inert waste, Type 1 special waste, and contaminated solid waste meeting waste acceptance criteria specified for Class I landfills, as determined by reference to the document entitled "Landfill Waste Classification and Waste Definitions 1996" (As amended).

Over the years the level of waste management services provided has increased at the site, including the disposal of used tyres, crushing and screening of construction and demolition wastes, chipping and mulching of bulk green waste, and the implementation of a waste sorting station in 2011 for builder's skip bins.

The majority of in-coming waste is demolition waste from J.W. Cross & Sons operations, local skip bin operators and the general public. Incoming trucks are screened at the gatehouse, prior to driving to the relevant area on the site for unloading. Most of the incoming waste from skip bins is segregated and processed (where required) for reuse (brick and concrete) or recycling (sand, cardboard, paper, wood, steel). Putrescible wastes are transferred to the adjacent landfill for disposal. Asbestos is accepted for burial where it is currently disposed of adjacent to the active inert cell. All loads are covered with inert wastes and clean fill.

Environmental management

There are no emissions or discharges authorised at the site; however impacts to sensitive receptors may result from a failure of landfill design or management or abnormal weather conditions. These failures might constitute discharge from the site of offensive odours, litter, dust and/or groundwater contamination. To minimise the risk of these failures from occurring, PRR implements a number of management measures such as the use of water sprays and progressive restoration for dust management, and burying waste with a minimum 2 metre separation distance to groundwater.

Hydrogeological investigations and reviews of local groundwater quality indicate the use of this site (and the adjoining Bunbury-Harvey Regional Council site) for landfilling wastes has resulted in contamination of the shallow groundwater resource. Additional monitoring bores were installed at the site in 2014 to further assess groundwater quality migrating on and off the site, and as part of requirements under the *Contaminated Sites Act 2003*.

Licence amendment

This licence amendment relates to an application made by the licensee for the acceptance of plastics for storage, recycling or burial, and includes changes to accurately reflect the activities occurring on site. It is proposed that plastics will be buried alongside construction and demolition waste in the current active waste cell 3. The amendment application also includes a request for significant increase in the capacity for waste acceptance (from 50,000 tonnes to 300,000 tonnes per annum) and for the crushing of building material (from 15,000 tonnes to 65,000 tonnes per annum).

The total "approved" capacity for landfilling under category 63 has been changed on the front page of the licence from 50,000 tonnes per annum to 115,000 tonnes per annum. This revised total includes the additional 20,000 tonnes for plastics, and also the existing approved volumes for clean fill, tyres and asbestos which were previously not reflected in the total despite these being inert landfilling activities. Waste acceptance volumes following this amendment and update are shown in the table below.



	Max amount (tpa) stored prior to burial/transfer/etc. (Cat 62)	Max amount (tpa) sent to Landfill (Cat 63)	Max amount (tpa) crushed (Cat 13) or otherwise processed	TOTAL received (tpa)
Inert Waste Type 1	215,000	50,000	60, 000	215,000
Inert Waste Type 2 (tyres, rubber)	15,000	15,000	n/a	15,000
Inert Waste Type 2 (plastic)	20,000	20,000	n/a	20,000
Clean fill	25,000	25,000	n/a	25,000
Special Waste Type 1 (cement-bonded asbestos)	5,000	5,000	n/a	5,000
Putrescible waste (green waste)	20,000	n/a	20,000	20,000
Putrescible waste (recycled glass)		n/a	5,000	
TOTAL (tpa)	300,000	115,000	85,000 (65,000 cat 13)	300,000

Only emissions and discharges relating to the amendments (acceptance, storage and burial of plastics, and an overall increase in the storage and handling of wastes) have been assessed in this Decision Document. Where changes have not been made to the condition/s of the licence, rows are not included in the Decision Table relating to the condition/s.



4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and DER's Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises. Where other references have been used in making the decision they are detailed in the decision document.

DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions		<p>Operation This section and conditions within it have been removed according to current licensing processes, as the conditions are considered redundant.</p>	
Premises operation	L1.2.1	<p>Operation Condition 1.2.1 and associated Table 1.2.1 have been amended in various locations as a result of the amendment application and the review of the licence.</p> <p>References to "Contaminated Solid Waste" have been removed from the condition and the table on request from the Licensee as they no longer accept this material (previously relevant to acid sulfate soils which were accepted for treatment, which no longer occurs).</p> <p>The quantity limits of the remaining wastes have also been amended in Table 1.2.1 in accordance with the amendment application (see fugitive emissions, noise, odour and emissions to land section/s for more details on the risk assessments relating to these increases). The Inert Waste Type 1 capacity has been significantly increased to reflect a more realistic potential for the solid waste depot activities (i.e. recycling station) on site. The Inert Waste Type 2 capacity has also been increased by 20,000 tonnes in accordance with the application to account for the non-biodegradable plastics proposed to be accepted for burial. Putrescible waste has also been increased fourfold to more accurately reflect the potential for the receipt of greenwaste onto the premises.</p> <p>Some amendments have also been made to the specifications column of Table 1.2.1.</p>	<p><i>Supporting Information from Peel Resource Recovery Pty Ltd to the Department of Environment Regulation (DER) for an Application to Amend Licence L7060/1997/13 (Form P4) (correspondence to DER dated 13 August 2015);</i></p> <p><i>Addenda to amend previous P4 application submitted 13th August 2015 (Correspondence</i></p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		A specification has been added for Inert Waste Type 1 to clarify that this waste can be accepted when it contains contaminants such as paper, plastics, glass, metal and wood, to better reflect current practices of the picking station where contaminants are recovered through the picking station. Another specification has been added prohibiting biosolids from being received on the premises (see emissions to land section for more details on the risk assessment for this change). Non-biodegradable plastics have been added to Inert Waste Type 2 in accordance with the amendment application (see fugitive emissions and emissions to land sections for details on risk assessment).	to DER dated 19 October 2015).
Premises operation	L1.2.3	<p>Operation Amendments have been made to Condition 1.2.3 and associated Table 1.2.2 as a result of this amendment.</p> <p>As per condition 1.2.1, references to Contaminated Solid Waste have been removed. References to “storage” and “processing” have been included in the Process(es) column where applicable process limits apply.</p> <p>Several changes have also been made to the content in the “Process limits” column of the table. The requirement to recover paper, cardboard, glass, metal and wood from Inert Waste Type 1 has been included as a process limit. This reflects current practice on site via the picking station. The restriction for landfilling to occur such that a minimum separation of 2 metres is maintained between the waste and the highest seasonal groundwater level has also been added (see Emissions to land section for more detail on the risk assessment). The restriction to bury no more than 50,000 tonnes of Inert Waste Type 1 has also been specified. This is because the capacity for landfilling activities has not increased through this amendment, despite the increase in the capacity for receiving this waste type through the solid waste depot (due to recycling potential). The restriction to crush no more than 60,000 tonnes of Inert Waste Type 1 has also been specified. The maximum crushing capacity was not previously included in the licence conditions so has been added to clarify the approved level, but is also a notable increase from the previous 15,000 tonnes that was mentioned on the front page of the previous licence (see the fugitive emissions and noise section for</p>	<p><i>Supporting Information from Peel Resource Recovery Pty Ltd to the Department of Environment Regulation (DER) for an Application to Amend Licence L7060/1997/13 (Form P4)</i> (correspondence to DER dated 13 August 2015);</p> <p><i>Addenda to amend previous P4 application submitted 13th August 2015</i> (Correspondence to DER dated 19 October 2015).</p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>more detail on the environmental assessment).</p> <p>The requirement to bury the new non-biodegradable plastics waste stream in the active cell for inert waste has been included for Inert Waste Type 2, as per the amendment application.</p> <p>A requirement to store all putrescible wastes on a bunded hardstand area has been included for Putrescible wastes to prevent leachate from contaminating the environment (see emissions to land section for more detail on the environmental assessment). This is reflective of current practice on the premises. The allowance of crushing of up to 5,000 tonnes of recycled class is also included. This is an existing activity on the premises but was never reflected clearly in the licence (see fugitive emissions, noise and emissions to land sections for more detail on the environmental assessment).</p>	
Premises operation	L1.2.4	<p>Operation Condition 1.2.4 has been amended to reflect more specific requirements with regards to the steepness of the final landfill profile, in accordance with other comparable instruments issued by DER.</p>	
Premises operation	L1.2.5	<p>Operation Condition 1.2.5 and associated Table 1.2.3 have been changed through this licence amendment with respect to cover requirements for the burial of tyres. It was noted that the previous version of the licence allowed the use of inert waste type 1 as cover over tyres; however this contradicts the <i>Environmental Protection Regulations 1987</i> which require a cover of soil. Table 1.2.3 has been amended to directly refer to Part 6 of the EP Regulations for the covering of tyres to avoid paraphrasing or doubling up on existing legislation which must be complied with.</p> <p>The Table has also been amended to reflect that where inert waste type 1 is used as cover it must not contain non-biodegradable plastics or any other contaminants, and similarly where inert waste type 1 is buried with non-biodegradable plastics mixed with</p>	Part 6 of the <i>Environmental Protection Regulations 1987</i>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		it, a minimum cover of 150mm of either clean fill (soil) or clean inert waste type 1 must be applied to address the risk of windblown waste or fire (see Fugitive emissions and Emissions to land section/s respectively for more details on the assessment/s).	
Emissions general		Operation Condition 2.1.1 from the previous version of the licence for the investigation of limits has been removed as part of this amendment as a result of there being no applicable limits on the licence.	
Emissions to land including monitoring	L1.2.1, 1.2.3 and 1.2.5	<p>Operation</p> <p><u>Emission Description</u> <i>Emission:</i> Leachate migration to groundwater from the burial of wastes which are unsuitable for inert landfilling (e.g. putrescible wastes, biosolids which contain high levels of contaminants such as nutrients, heavy metals and hydrocarbons, etc.) and/or at a depth where the waste intercepts groundwater. <i>Impact:</i> Contamination of surrounding land, groundwater and surface water drainage systems. Potential impacts on ecology of nearby surface water from the addition of nutrients and heavy metals. There is surface water in the form of the Brunswick River and . The soil on the premises is sandy and there is a shallow aquifer (2 – 4 mBGL) under the premises which is showing signs of contamination (Contaminated Sites database). <i>Controls:</i> The Licensee no longer receives contaminated solid wastes on the premises (acid sulfate soils) and does not routinely accept biosolids (which would require thorough analysis and assessment against the Landfill Waste Classifications and Waste Definitions). The proposal to receive plastics relates only to durable inert plastics such as strapping, pipes, buckets, cable reels and pallets. All other non-conforming waste types are removed at the concrete-lined picking station. Six-monthly groundwater monitoring is conducted on the premises for a range of potential contaminants.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Moderate</p>	<p><i>Contaminated Sites Act 2003 Basic Summary of Records; 70 Stanley Rd, Wellesley WA 6233 (as at 2 February 2016);</i></p> <p>Landfill Waste Classification and Waste Definitions 1996 (as amended)</p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u> “Non-biodegradable plastics” have been specifically defined on the licence to limit the range of plastics allowed to be landfilled. The licensee had requested that “plastic wrapping” be included as an allowable material for burial; however this has been excluded due to the likely higher propensity for this material to biodegrade in the landfill, as compared with the other more durable plastics proposed.</p> <p>Condition 1.2.1 / Table 1.2.1 (Premises operation section) has been amended to reflect the addition of “non-biodegradable plastics” only. Contaminated solid waste has also been removed from the list of allowable wastes and so has biosolids due to the propensity for these to contain contaminants which exceed the Class I contaminant concentrations. The volume of Inert Waste Type 2 has also been capped at a combined 35,000 tonnes (for tyres, rubber and non-biodegradable plastics).</p> <p>Condition 1.2.3 / Table 1.2.2 (Premises operation section) has also been amended with a requirement for all wastes landfilled to achieve a minimum 2 metres buffer from the highest groundwater level, to reduce the risk of groundwater contamination. The table also specifies that the burial of non-biodegradable plastics only occurs within the active landfilling area.</p> <p>Condition 1.2.5 / Table 1.2.3 has been amended to include non-biodegradable plastics with inert waste type 1. It is noted that there is no cover required for this waste type, and this has not been changed even with the addition of non-biodegradable plastics, as it is considered that the exposure of this waste should not pose a significant environmental risk to groundwater due to its inert nature.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Unlikely</p>	



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<i>Risk Rating: Moderate</i>	
Emissions to land including monitoring	L1.2.3	<p>Operation</p> <p><u>Emission Description</u> <i>Emission:</i> Stormwater contaminated with leachate from the storage of putrescible waste/s (i.e. recycled glass contaminated with putrescible materials and greenwaste) in higher quantities (5,000 tonnes – 20,000 tonnes) at the picking station and/or other storage areas. <i>Impact:</i> Contamination of surrounding land, groundwater and surface water drainage systems. Potential impacts on ecology of nearby surface water from the addition of nutrients and heavy metals. There is surface water in the form of the Brunswick River and . The soil on the premises is sandy and there is a shallow aquifer (2 – 4 mBGL) under the premises which is showing signs of contamination (Contaminated Sites database). <i>Controls:</i> The Licensee currently stores recycled glass on an existing concrete hardstand area. Greenwaste is stored in largely un-mulched condition which will minimise breakdown and potential leachate generation. Recycled glass and greenwaste are not landfilled on the premises. Other putrescible contaminants which arrive through the picking station (cardboard, paper, plastics, timber, etc.) are stored for a limited period of time before being transferred to the neighbouring putrescible landfill site, and the picking station is concrete lined. Timber received as a contaminant in inert waste loads is treated as putrescible waste and segregated for transfer off-site, and is not combined with the greenwaste which is intentionally accepted for later rehabilitation of the site.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Moderate</p>	<p><i>Contaminated Sites Act 2003 Basic Summary of Records; 70 Stanley Rd, Wellesley WA 6233 (as at 2 February 2016);</i></p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><u>Regulatory Controls</u> Condition 1.2.3 / Table 1.2.2 (Premises operation section) already requires the segregation of contaminants from the inert waste stream and this is considered adequate for the management of these wastes in light of the increase in volume of inert wastes coming through (50,000 tonnes – 215,000 tpa) and potential increase in the overall volume of contaminants. The putrescible landfill site to which these contaminants will go is located directly across the road. The condition has however been amended to formalise the requirement for putrescible wastes to be stored on a hardstand only (defined as an imperviously lined, bunded area). This applies to both recycled glass and greenwaste (which can also leach contaminants to groundwater if stored on an unlined surface). This is considered necessary given the significant increase in capacity from 5,000 tonnes to 20,000 tonnes for these wastes being stored for potentially long period of time whilst awaiting crushing or mulching.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Moderate</p>	
Emissions to land including monitoring	L1.2.3, L4.3.1	<p>Operation <u>Emission Description</u> <i>Emission:</i> Leachate discharge from a landfill fire where non-biodegradable plastics are burned, and/or contaminated fire water from attempts to extinguish such fires. <i>Impact:</i> Contamination of surrounding land, groundwater and surface water drainage systems. Potential impacts on ecology of nearby surface water from the addition of residues from plastics decomposition. There is surface water in the form of the Brunswick River and . The soil on the premises is sandy and there is a shallow aquifer (2 – 4 mBGL) under the premises which is showing signs of contamination (Contaminated Sites database). <i>Controls:</i> There are no proposed controls for the management of fire leachate in the</p>	Supporting Information from Peel Resource Recovery Pty Ltd to the Department of Environment Regulation (DER) for an Application to Amend Licence L7060/1997/13 (Form P4)



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>instance that a fire was to occur; however a number of fire management measures are in place for minimising the risk of fire and for the rapid extinguishing of a fire if it were to occur, including having a water tanker on site at all times, maintenance of a 3 metre fire break around the site, annual controlled burns are undertaken, equipment being regularly serviced and not used on high fire risk days, and not storing plastic above ground for more than 4 hours at a time.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u> Condition 1.2.3 / Table 1.2.2 (Premises operation section) has been amended to reflect the acceptance of plastics, and also require that where inert waste type 1 is used as cover it must not contain non-biodegradable plastics or any other contaminants, and similarly where inert waste type 1 is buried with non-biodegradable plastics mixed with it, a minimum cover of 150mm of either clean fill (soil) or clean inert waste type 1 must be applied immediately in accordance with the commitments made in the amendment application. This is to address the risk of fire spreading to plastics in and on the landfill resulting in unnecessary contamination of groundwater and soils.</p> <p>Condition 4.3.1 and the associated Form N1 attachment have been modified on the licence such that Landfill fire/s are also required to be reported to DER.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Moderate</p>	(correspondence to DER dated 13 August 2015);
Fugitive	L1.2.3, L3.1.1 – 3.1.2	Operation	<i>Report for Stanley</i>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
emissions		<p><u>Emission Description</u> <i>Emission:</i> Fugitive dust emissions from the increased acceptance of waste generally through the transfer station (through increased vehicle and machinery movements on the premises) and from the increase in the crushing of inert waste type 1 from 15,000 tonnes – 65,000 tonnes. <i>Impact:</i> Potential health and amenity impacts to staff and nearby land users (450 metres away), and potential health impacts to nearby vegetation through smothering. <i>Controls:</i> The licensee has committed to maintaining the various existing dust suppression activities in their Environmental Management Plan (EMP) including the operation of a sprinkler system to keep the picking station and other stockpiles damp as required, the wetting of loads prior to tipping into the landfill area, the use of a water truck on a daily basis as/if required in dry conditions to wet down roadways. The picking station is also already completely concreted to further minimise dust during machinery movements, the incoming truck access road from the site entrance is bitumised, and there is a speed hump and wheel wash on the exit road. The overall site speed is also limited to 8km/hour. In terms of the crushing activities specifically, the crusher is equipped with dust guards and covers, and crushing and screening activities are only conducted on days where wind conditions are calm. The water truck is used if required to wet down the crushing area; however the majority of crushing is undertaken in winter when additional water is not required and other business (construction/ demolition waste receivals) is slow.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u> Given the extent of existing dust management measures undertaken in accordance with the EMP, and the existence of infrastructure which prevents dust (i.e. bitumised</p>	<p><i>Road Materials Recovery Facility Environmental Management Plan</i> (prepared by GHD Pty Ltd for Peel Resource Recovery Pty Ltd, January 2012);</p> <p>General provisions of the <i>Environmental Protection Act 1986</i>;</p> <p><i>Report for Stanley Road Materials Recovery Facility Operational Management Plan</i> (prepared by GHD Pty Ltd for Peel Resource Recovery Pty Ltd, January 2012)</p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>roads, concrete hardstand under the picking station, etc.) the need for specific licence conditions for the management of dust is reduced.</p> <p>Condition 2.6.1 from the previous version of the licence requiring all reasonable and practical measures to minimise dust has been removed, as it is considered to be adequately covered by the general pollution provisions of the <i>Environmental Protection Act 1986</i>.</p> <p>Condition 1.2.3 / Table 1.2.2 (Premises operation section) sets the maximum volumes for the crushing of inert waste type 1 and recycled glass to ensure that increases beyond which has been committed to do not occur.</p> <p>Condition 3.1.1 and 3.1.2 / Table 3.1.1 (Improvements) have been included for the EMP and the Operational Management Plan (OMP) to be reviewed and updated as a result of the significant increase in capacity. This is to ensure both the EMP and the OMP (containing various commitments in relation to dust management) are kept up to date for use by the Licensee.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Moderate</p>	
Fugitive emissions	L1.2.3 – 1.2.5, L1.2.7	<p>Operation <u>Emission Description</u> <i>Emission:</i> Fugitive emissions of windblown waste from the increased acceptance of waste generally through the transfer station (resulting in an increase of the picking out of contaminants and recyclables) and from the intentional receipt of plastics for burial which may become windblown if not managed appropriately. <i>Impact:</i> Potential amenity impacts to nearby land users and pollution of nearby surface water bodies. <i>Controls:</i> The licensee has committed to a number of management measures in their</p>	<i>Report for Stanley Road Materials Recovery Facility Environmental Management Plan (prepared by GHD Pty Ltd for Peel Resource Recovery Pty Ltd, January 2012);</i>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>EMP and OMP including restricted storage time for plastics (4 hours) prior to burial, maintaining a mesh fence around the picking station and also around the site perimeter, conducting daily patrols of the premises for the removal of litter, the covering of plastics immediately with 150mm of soil and the ceasing of operations where conditions are windy. New staff members are also inducted into litter prevention practices.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u> Condition 1.2.3 (Premises operation section) already requires all contaminants within inert waste type 1 to be recovered, segregated and removed as soon as possible. Condition 1.2.4 (Premises operation section) has been amended to be more specific in terms of the final landfill profile not exceeding a slope greater than 20 degrees to help with retaining rehabilitation material and therefore ensure that waste is not uncovered once it has been buried. Condition 1.2.5 / Table1.2.3 (Premises operation section) has also been amended to specify the minimum cover requirements for non-biodegradable plastics of at least 150mm immediately following placement in the cell, in accordance with the commitments made in the EMP and OMP. Plastics are also excluded from being used with inert waste type 1 as a cover material within this condition. The existing licence condition 1.2.7 (Premises operation section) also addresses the risk of windblown waste by specifying a minimum weekly collection.</p> <p><u>Residual Risk</u></p>	<p><i>Report for Stanley Road Materials Recovery Facility Operational Management Plan (prepared by GHD Pty Ltd for Peel Resource Recovery Pty Ltd, January 2012);</i></p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p>	
Odour	L1.2.1, L1.2.3	<p>Operation <u>Emission Description</u> <i>Emission:</i> Odour emissions from the interim storage and transfer of putrescible wastes which arrive mixed with inert waste (the potential volume of which has significantly increased as part of this amendment) and from the long-term storage of recycled glass (containing putrescible residues and materials) and green waste, which have increased in capacity as a result of this amendment application. <i>Impact:</i> Potential amenity impacts to nearby land users. The nearest residential neighbour is approximately 450m from the premises. <i>Controls:</i> The Licensee has not proposed any specific changes to odour management as a result of the amendment application; however the EMP for the premises includes some existing management measures for odour including the immediate removal of any wastes received which are contaminated with putrescible waste (with exception to green waste and recycled glass which are received intentionally), and restrictions on volumes of greenwaste brought to site. Greenwaste is also only mulched as requires, minimising the chance of early decomposition of greenwaste which may result in odour. Greenwaste is also stored in windrows to maximise aeration.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u> Condition 1.2.1 (Premises operation section) sets the maximum approved volumes of putrescible wastes (greenwaste and recycled glass) able to be received as no more</p>	<p><i>Report for Stanley Road Materials Recovery Facility Environmental Management Plan (prepared by GHD Pty Ltd for Peel Resource Recovery Pty Ltd, January 2012);</i></p> <p><i>Section 49 of the Environmental Protection Act 1986</i></p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>than 20,000 tonnes. This has increased from the previous version of the licence which allowed 5,000 tonnes; however there is no history of odour complaints relating to this premises. The existing odour management measures relating to greenwaste are considered appropriate.</p> <p>Condition 1.2.3 / Table 1.2.2 (Premises operation section) also includes the requirement for the removal and segregation of putrescible wastes from the picking station for removal off the premises as soon as possible.</p> <p>Condition 2.7.1 from the previous version of the licence relating to ensuring odour emitted does not unreasonably interfere with people off the premises has been removed as it is adequately covered by section 49 of the <i>Environmental Protection Act 1986</i>.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low</p>	
Noise	N/A	<p>Operation</p> <p><u>Emission Description</u> <i>Emission:</i> Noise from increased vehicle and machinery (including screening) movements on site due to increased waste receivals, and from the significant increase in crushing of concrete and recycled glass. <i>Impact:</i> Potential amenity impacts tot nearby land users. The nearest residential neighbour is approximately 450m from the premises. <i>Controls:</i> The licensee has converted all machinery in the picking/recycling station from diesel or generator powered to electricity powered equipment to reduce noise emissions. All operations are conducted within daylight hours. Crushing activities are conducted on the base of the pit and therefore is inherently surrounded by sand walls to mitigate noise. No complaints have ever been received in relation to noise from the premises. The increase in crushing activities is not likely to increase noise levels, but</p>	<i>Environmental Protection (Noise) Regulations 1997</i>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>rather may result in more crushing events through the year.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u> Noise has not been highlighted as an issue for this premises in the past and the amendment is unlikely to result in an increase to noise levels overall. It is considered that noise can be adequately regulated using the Noise Regulations. If noise is highlighted as an issue in future, management through specific licence conditions can then be considered.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p>	
Monitoring general	N/A	<p>Operation Condition 2.1.3 from the previous version of the licence (relating to recording of production data(has been removed as part of this amendment as it is already adequately covered in the Monitoring of inputs and outputs and process monitoring sections.</p>	
Monitoring of inputs and outputs	L2.2.1	<p>Operation Condition 2.2.1 and the associated Table 2.2.1 have been updated. Reference to Contaminated solid waste has been removed, and allowance to record volumes (m³) rather than weight (tonnes) has been allowed. There is no weighbridge on the premises for the accurate reporting of weight, hence it is considered that monthly monitoring should be conducted in m³ and an estimation of tonnes provided.</p>	



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Process monitoring	L2.3.1	Operation Condition 2.3.1 for Process monitoring has been included on the licence requiring the monitoring of crushing activities (inert waste and glass). This was not required under the previous version of the licence; however is necessary for DER to keep an accurate understanding of the activities and their significance on the premises from year to year, and also detect whether the activities are approaching or exceeding their approved maximums. As per condition 2.2.1 the condition enables monitoring to be done in m ³ , with a conversion to tonnes also provided.	
Improvements	L3.1.1 – 3.1.2	Operation The improvement conditions IR1 – IR4 that were on the previous version of the licence have been removed as the due date/s has passed. The Licensee submitted an update on progress on 20 March 2015 to satisfy IR1, in which it was advised that no more recycled glass would be received and detailed the management actions proposed to manage “lights” from existing storage to address IR2 and basic details were provided on the future relocation of the tyre monofil in response to IR3. Separate to this, the report on production bore data was also provided on 29 April 2015 to satisfy IR4. As a result of this amendment, three new improvement conditions IR1 – IR3 have been added, for the review and update of the Environmental Management Plan, Operational Management Plan and Site Closure Plan, respectively. It is acknowledged that these documents are in existence from their development as part of the Environmental Improvement Plan in 2012; however the significant nature of the amendment to activities on site (new waste stream, significant increase in capacity for several waste streams and significant increase in crushing activities) it is considered appropriate for these documents to undergo a thorough review.	<i>Report for Stanley Road Materials Recovery Facility Environmental Improvement Plan (prepared by GHD Pty Ltd for Peel Resource Recovery Pty Ltd, January 2012)</i>
Records	L4.1.2	Operation Condition 4.1.2 from the previous version of the licence (relating to the persons left in charge of the premises and/or performing tasks on the premises being required to be aware of all relevant licence conditions) has been removed in accordance with similar instruments recently issued, due to being considered as a redundant condition.	



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Reporting	L4.2.1	Operation Condition 4.2.1 has been changed on the licence to include the need for Process monitoring to be included in the annual report and now also specifies the requirement for a rationale of bulk density/s used in converting m ³ to tonnes for Monitoring of inputs and outputs and process monitoring.	
Notification	L4.3.1	Operation Condition 4.3.1 and the associated Form N1 attachment have been modified on the licence such that Landfill fire/s are required to be reported to DER. The condition previously required the reporting of <i>any incident</i> which may have been causing pollution; however this requirement is adequately covered under Section 72 of the <i>Environmental Protection Act 1986</i> and does not need to be set as a licence condition. The reporting of landfill fires specifically is integral for DER due to the tyre monofil on the premises and the proposed presence of plastics in the inert landfill cells which may also cause toxins to be released to air, soil and groundwater if they catch alight (see Emissions to land section for more detail on the environmental assessment).	Section 72 of the <i>Environmental Protection Act 1986</i>



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
10/12/2015	Application referred to interested parties listed	<p>Department of Water (DoW) highlighted that a separate document '<i>Water Management Plan, 360 Environmental, September 2014</i>' for this premises (which was referred to DoW by the Shire of Harvey as part of the Extractive Industries Licence) is inconclusive in respect of the nature of the site's status as a 'Contaminated Site'.</p> <p>DoW holds the view that early planning for (contaminant) remediation, rehabilitation and closure of the site is highly desirable. The contamination status of the site should be established and the source of the suspected groundwater contamination determined and mapped, prior to any decision being made on the proposed expansion.</p>	<p>Contamination status of the site is being addressed through the <i>Contaminated Sites Act 2003</i>. As there is no significant difference proposed to the land use the application it is unlikely to affect the contamination status of the premises.</p> <p>Assessments to characterise the contamination status of the site are ongoing in conjunction with the Contaminated Sites section of DER.</p>
		<p>DoW recommends that prior to any approval for an increased acceptance capacity and/or processing capacity being granted, a review of the intended long term management of the site be undertaken (i.e. the provision of a revised closure plan). DoW notes that the magnitude of the expansion – 6 x acceptance capacity – perhaps implies that more 'space' will be filled and/or the lifespan of the facility will be dramatically reduced and final fill levels, or fill regime, could be altered.</p>	<p>It is noted that the 6 x capacity increase relates to the solid waste depot (waste transfer) activities on site, not the landfilling capacity which will remain unchanged apart from the addition of non-biodegradable plastics. This has been ensured through the provision of a limit to the amount of material allowed to be landfilled in condition 1.2.3.</p> <p>Notwithstanding the above, due to the additional waste stream proposed and the length of time since the Closure Plan for the site was developed (4 years) an</p>



Date	Event	Comments received/Notes	How comments were taken into consideration
			improvement condition has also been set requiring review and update of the plan.
		DoW notes that the proponent has a RIWI licence to take groundwater for the purposes of dust suppression and rehabilitation. However, there is no information provided as to the future water requirements with the proposed expansion. The proponent should therefore ensure and secure their future water use requirements. It is noted that the water resource is limited, as also stated in the WMP.	It is agreed that any increase in water requirements will need to be obtained by the Licensee via the relevant regulatory mechanisms. While it is not a subject for this DER licence specifically, the need to ensure water availability to be able to undertake responsible dust management and comply with the Licensees EMP and the general provisions of the <i>Environmental Protection Act 1986</i> has been flagged with the Licensee for action.
4/02/2016	Proponent sent a copy of draft instrument	Proponent requested waiver of 21 days. No formal comments made; however it was mentioned in conversation that it would be preferred if the due dates for the improvement conditions were actual dates, not dates based on the amendment date.	Due dates in Table 3.1.1 changed to equivalent actual date – from “within 8 months of the amendment date of this licence” to “18 October 2016”.



6 Risk Assessment

Note: This matrix is taken from the DER Corporate Policy Statement No. 07 - Operational Risk Management

Table 1: Emissions Risk Matrix

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
Almost Certain	Moderate	High	High	Extreme	Extreme
Likely	Moderate	Moderate	High	High	Extreme
Possible	Low	Moderate	Moderate	High	Extreme
Unlikely	Low	Moderate	Moderate	Moderate	High
Rare	Low	Low	Moderate	Moderate	High